UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/988,136	11/19/2001	Toshihiro Oouchi	216315US2S	8183

22850 7590 02/21/2007 OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314	**EXAMINER** NELSON, FREDA ANN

ART UNIT	PAPER NUMBER
3628	

SHORTENED STATUTORY PERIOD OF RESPONSE	NOTIFICATION DATE	DELIVERY MODE
3 MONTHS	02/21/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Notice of this Office communication was sent electronically on the above-indicated "Notification Date" and has a shortened statutory period for reply of 3 MONTHS from 02/21/2007.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com
oblonpat@oblon.com
jgardner@oblon.com

<table>
<tr><td rowspan="2">Office Action Summary</td><td>Application No.</td><td>Applicant(s)</td><td></td></tr>
<tr><td>09/988,136</td><td>OOUCHI, TOSHIHIRO</td><td></td></tr>
<tr><td></td><td>Examiner</td><td>Art Unit</td><td></td></tr>
<tr><td></td><td>Freda A. Nelson</td><td>3628</td><td></td></tr>
</table>

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>31 October 2006</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>18 and 20</u> is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>18 and 20</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>30 January 2002</u> is/are: a)☐ accepted or b)☒ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a)☐ All b)☐ Some * c)☐ None of:

   1.☐ Certified copies of the priority documents have been received.

   2.☐ Certified copies of the priority documents have been received in Application No. _____.

   3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
   Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

The amendment received on October 31, 2006 is acknowledged and entered.

Claims 18 and 20 have been amended. Claims 1-17 and 19 have been canceled.

Claims 18 and 20 are currently pending.

Response to Amendments and Arguments

Applicant's arguments filed October 31, 2006 have been fully considered but they

are not persuasive.

In response to applicant's argument that in regards to claims 18 and 20, the

manner that this man-hour estimation must be accomplished is set forth in details that

are not remotely suggested by the cost estimation of Suzuki, the examiner asserts that

Suzuki et al. disclose method and apparatus for estimating a cost of a component

product by use of a database that contains, for example, manufacturing conditions of a

manufacturing facility, manufacturing time, required expenses and other cost factors

necessary for manufacturing the component product (paragraph [0002]; [[0143],[0146]]).

Drawings

1.   The drawings are objected to because **FIG. 4 contains "Men-houss"**.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to

the Office action to avoid abandonment of the application. Any amended replacement

drawing sheet should include all of the figures appearing on the immediate prior version

of the sheet, even if only one figure is being amended. The figure or figure number of an

amended drawing should not be labeled as "amended." If a drawing figure is to be

canceled, the appropriate figure must be removed from the replacement sheet, and

where necessary, the remaining figures must be renumbered and appropriate changes

made to the brief description of the several views of the drawings for consistency.

Additional replacement sheets may be necessary to show the renumbering of the

remaining figures. Each drawing sheet submitted after the filing date of an application

must be labeled in the top margin as either "Replacement Sheet" or "New Sheet"

pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the

applicant will be notified and informed of any required corrective action in the next Office

action. The objection to the drawings will not be held in abeyance.

Specification

2.   The disclosure is objected to because of the following informalities:

Page 11, line 4, "database 4" should be "database 5";

Page 13, line 13, "2" should be "3";

Page 16, lines 21, "process" should be "man-hour-";

Page 17, line 27, "11" should be "4";

Page 19, line 22, "cost-estimating" should be "man-hour";

Page 20, lines 5, and 7 respectively, "cost-estimating" should be "man-hour";

Page 20, line 8, "18" should be "12"; and

Page 25, line 8-9, "cost-estimating" should be "man-hour".

Appropriate correction is required.

Claim Objections

3.   Claim 20 is objected to because of the following informalities:

Claim 20, line 43, "molod-changing" should be "mold-changing";

Claim 20, line 54, delete the "t" after "configured" and insert "to" after

"configured".

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly
> claiming the subject matter which the applicant regards as his invention.

4.   Claims 18 and 20 are rejected under 35 U.S.C. § 112, second paragraph, as

being indefinite for failing to particularly point out and distinctly claim the subject matter

which applicant regards as the invention.

In particular, claim 18 recites in the preamble "a product manufacturing man-hour

estimating apparatus", however, the body of the claim consist of modules (software

according to the specification) that do not describe the structure of the device.

Appropriate correction is required.

As per claim 18, the examiner is unable to determine what the applicant is

claiming by the claim language a "three dimensional CAD".

As for claim 18, the examiner is unable to determine what the applicant is claiming by the claim language "three dimensional CAD creating three-dimensional model data".

As per claim 18, the examiner is unable to determine if the estimation-element – extracting section or the three-dimensional CAD is adding attribute information.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5.   Claims 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki et al. (US PG Pub. 2001/0023418) in view of Yuri et al. (US Patent Number 6,249,715).

As per claim 18, Suzuki et al. disclose an estimation element database which stores necessary estimation elements necessary for manufacturing estimation of the product (paragraph [0008]; FIGS. 1 and 3);

a manufacturing process design reference database which stores reference data setting a manufacturing process of the product (paragraph [0121]);

an estimation reference database which stores (i) an estimation formula to calculate a man-hour in of the manufacturing process by substituting the estimation

elements and a (ii) physical unit table indicating each value of the estimation elements

as a physical unit value (paragraph [0008]; FIGS. 1 and 3);

an estimation-element-extracting section which (1) is connected to a three-

dimensional CAD creating three-dimensional CAD model data on the product and

adding attribute information including the estimation elements to the three-dimensional

CAD model data, (ii) receives the three-dimensional CAD model data from the three-

dimensional CAD, and (iii) extracts the estimation elements from the attribute

information (paragraph [0008], [0029]; FIGS. 1 and 3);

a manufacturing process setting section which sets the manufacturing process

by searching the reference data for setting the manufacturing process stored in the

manufacturing process design reference database, based on the estimation elements

extracted by the estimation-element extracting-section (paragraph [0121]); and

an estimation program memory in which an estimation program is stored

beforehand, the estimation program (i) creating first source program configured to

extract the estimation elements from the estimation formula stored in the estimation

reference database, and convert the extracted first estimation elements into a format

including names of the estimation elements and a identifier, (ii) creating the second

source program configured to extract the estimation elements from the estimation

formula, convert the estimation elements into the format including the names of the

estimation elements and the identifier, and extract the physical unit value corresponding

to the names of estimation elements and the identifier from the physical unit table , and

(iii) converting the estimation formula into the format including the names of estimation

elements and the identifier by executing the first and second source programs

(paragraphs [0008],[0104),[0035]-[0036],[0106]); FIG. 9).

Suzuki et al. disclose method and apparatus for estimating a cost of a

component product by use of a database that contains, for example, manufacturing

conditions of a manufacturing facility, manufacturing time, required expenses and other

cost factors necessary for manufacturing the component product (paragraph [0002];

[[0143],[0146]).

Suzuki et al. do not expressly disclose a man-hour estimation section which (i)

creates a first source program configured to execute the estimation program stored in

the estimation program memory, extract the estimation elements from the estimation

formula stored in the estimation reference database, and convert the estimation

elements into the format including the names of the estimation elements and an

identifier, (ii) creating the second source program configured to extract the estimation

elements from the estimation formula, convert the estimation elements into the format

including the names of the estimation elements and the identifier, and extract the

physical unit value corresponding to the names of the estimation elements and the

identifier from the physical unit table, (iii) converts the estimation elements into the

format including the names of the estimation elements and the identifier by executing

the first and second source programs, and (iv) calculates the man-hour in the

manufacturing process setting section by substituting the physical unit value in the

converted estimation formula.

However, Yuri et al. disclose by assigning each element work to respective workers so that an assigned operation time per worker is kept in equilibrium with the predicted operation time between respective workers (based on a calculated predicted operation time), the operation time for respective workers can be made equal (or nearly equal) within a minimum operation time (col. 2, line 64 through col. 3, line 6; FIGS. 8 and 11). Yuri et al. further disclose determining a normal operation time per worker, based on a total man-hours to be worked and the total number of workers to be assigned (col. 3, lines 23-25).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Suzuki et al to include the feature of Yuri et al. on order to provide an itemization of the time it takes to manufacture a product.

As for claim 20, Suzuki et al. disclose a manufacturing process design reference database which stores reference data setting a manufacturing process of the product (paragraph [0121]);and

a manufacturing process setting section which sets the manufacturing process by searching the reference data for setting the manufacturing process stored in the manufacturing process design reference database, based on the estimation elements extracted by the estimation-element-extracting-section (paragraph [0121]).

Suzuki et al. do not expressly disclose an estimation element database which stores data on a component including at least plate thickness, length and width,

bending-treatment time, a number of occasions of the bending treatment, and mold-

changing unit time as estimation elements necessary for manufacturing estimation of

the product;

an estimation reference database which stores (i) an estimation formula which

has bending-treatment including at least plate thickness, length and width, bending-

treatment time, a number of occasions and the mold-changing unit time including the

plate thickness, the length and the width and calculates a man-hour in the

manufacturing process substituting the bending-treatment time, the number of

occasions and the mold-changing unit time, and (ii) stores a physical unit table

indicating each value of the plate thickness, the length and the width as physical unit

value;

an estimation-element-extracting section which (i) is connected to a three-

dimensional CAD creating three-dimensional CAD model data on the product and

adding attribute information including the estimation elements to the three-dimensional

CAD model data, (ii) receives the three-dimensional CAD model data from the three-

dimensional CAD, and (iii) extracts the estimation elements from the attribute

information; and

an estimation program memory in which an estimation program is stored

beforehand, the estimation program (i) creating the first source program configured to

extract the plate thickness, the length, the width, the number of occasions and the

molod-changing unit time from the estimation formula stored in the estimation reference

database and convert the plate thickness, the length, the width, the number of

occasions and the mold-changing unit time into formats each of which includes the

names of estimation elements and the identifier, (ii) creating the second source program

configured to convert the plate thickness, length and width of the mold-changing unit

time corresponding to the plate thickness length and width of the physical unit table

included in the estimation formula into the formats each of which includes the names of

estimation elements and the identifier, and (iii) converting the estimation formula into the

format including the names of estimation elements of the bending-treatment time, the

number of occasions and the mold-changing unit time and the identifier by executing the

first and the second source program, however claims directed to an apparatus must be

distinguished from the prior art in terms of structure rather than function, *In re Danly* 263

F.2d 844, 847, 120 USPQ 582, 531 (CCPA 1959). A claim containing a "recitation with

respect to the manner in which a claimed apparatus is intended to be employed does

not differentiate the claimed apparatus from a prior art apparatus" if the prior art

apparatus teaches all the structural limitations of the claim. *Ex parte Masham*, 2

USPQ2d 1657 (bd Pat. App. & Inter. 1987). Thus the structural limitations of claim 20

including a database and memory are disclosed in Suzuki et al. as described herein.

Also as described, the limitations of the claim do not distinguish the claimed apparatus

from the prior art. Suzuki et al. discloses a method and apparatus for estimating a cost

of a component product by use of a database that contains, for example, manufacturing

conditions of a manufacturing facility, manufacturing time, required expenses and other

cost factors necessary for manufacturing the component product (see paragraph

[0002]). Therefore, the apparatus in Suzuki et al. is "capable" of estimating time in a manufacturing process.

Suzuki et al. does not further disclose a man-hour-estimating section which (i) creates a first source program configured t execute the estimation program stored in the estimation program, memory, extract the plate thickness, the length, the width, the number of occasions and the mold-changing unit time from the estimation formula stored in the estimation reference database, and convert the plate thickness, the length, the width, the number of occasions and the mold-changing unit time into the formats each of which includes the names of estimation elements and the identifier, (ii) creates the second source program configured to convert the plate thickness, length and width of the physical unit table included in the estimation formula into the formats each of which includes the names of estimation elements and the identifier, (iii) converts the estimation formula into the format including the names of estimation elements of the bending-treatment time, the number of occasions and the mold-changing unit time and the identifier by executing the first and the second source program, and (iv) calculates the man-hour in the manufacturing process set by the manufacturing process setting section, by substituting the physical unit value in the converted estimation formula

However, Yuri et al. disclose by assigning each element work to respective workers so that an assigned operation time per worker is kept in equilibrium with the predicted operation time between respective workers (based on a calculated predicted operation time), the operation time for respective workers can be made equal (or nearly equal) within a minimum operation time (col. 2, line 64 through col. 3, line 6; FIGS. 8

and 11). Yuri et al. further disclose determining a normal operation time per worker, based on a total man-hours to be worked and the total number of workers to be assigned (col. 3, lines 23-25).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Suzuki et al to include the feature of Yuri et al. on order to provide an itemization of the time it takes to manufacture a product.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

6.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Freda A. Nelson whose telephone number is (571) 272-7076. The examiner can normally be reached on Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Hayes can be reached on 571-272-6708. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

FAN 02/02/2007

JOHN W. HAYES
SUPERVISORY PATENT EXAMINER